

We claim:

1. A fuel composition comprising a major amount of a gasoline fuel having a  
5 maximum sulfur content of 150 ppm by weight and a minor amount of at least one  
gasoline fuel additive having detergent action or having a valve seat wear-inhibiting  
action, wherein this gasoline fuel additive has at least one hydrophobic hydrocarbon  
radical having a number-average molecular weight (MN) of from 85 to 20 000 and at  
10 least one polar moiety, and wherein the fuel composition also has a content of at least  
one lower alkanol of from about 5 to 75% by volume.
2. The fuel composition according to claim 1. wherein the polar moiety is selected  
from:
  - 15 (a) mono- or polyamino groups having up to 6 nitrogen atoms, of which at least one  
nitrogen atom has basic properties,
  - (b) nitro groups, if appropriate in combination with hydroxyl groups,
  - 20 (c) hydroxyl groups in combination with mono- or polyamino groups, in which at least  
one nitrogen atom has basic properties,
  - (d) carboxyl groups or their alkali metal or their alkaline earth metal salts,
  - 25 (e) sulfonic acid groups or their alkali metal or alkaline earth metal salts,
  - (f) polyoxy-C2- to -C4-alkylene groups which are terminated by hydroxyl groups,  
mono- or polyamino groups, in which at least one nitrogen atom has basic properties,  
or by carbamate groups,
  - 30 (g) carboxylic ester groups,
  - (h) moieties derived from succinic anhydride and having hydroxyl and/or amino  
and/or amido and/or imido groups and
  - 35 (i) moieties obtained by Mannich reaction of substituted phenols with aldehydes and  
mono- or polyamines.

3. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (a), polyalkenemono- or polyalkylenepolyamines based on polypropylene, polybutene or polyisobutene having  $M_n$  = from 300 to 5 000.
- 5 4. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (b), reaction products of polyisobutenes having an average degree of polymerization  $P$  = from 5 to 100 with nitrogen oxides or mixtures of nitrogen oxides and oxygen.
- 10 5. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (c), reaction products of polyisobutene epoxides obtainable from polyisobutene having predominantly terminal double bonds and  $M_n$  = from 300 to 5 000 with ammonia, mono- or polyamines.
- 15 6. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (d), copolymers of  $C_2$ - $C_{40}$ -olefins with maleic anhydrides which have a total molar mass of from 500 to 20 000 and of whose carboxyl groups some or all have been converted to the alkali metal or alkaline earth metal salts and any remainder of the carboxyl groups have been reacted with alcohols or amines.
- 20 7. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (e), alkali metal or alkaline earth metal salts of an alkyl sulfosuccinate.
- 25 8. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (f), polyethers or polyetheramines obtainable by reacting  $C_2$ - $C_{30}$ -alkanols,  $C_6$ - $C_{60}$ -alkanediols, mono- or di-  $C_2$ - $C_{30}$ -alkylamines,  $C_1$ - $C_{30}$ -alkylcyclohexanols or  $C_1$ - $C_{30}$ -alkylphenols with from 1 to 30 mol of ethylene oxide and/or propylene oxide and/or butylene oxide per hydroxyl group or amino group and, in the case of polyetheramines, by subsequent reductive amination with ammonia, monoamines or polyamines.
- 30 9. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (g), esters of mono-, di- or tricarboxylic acids with long-chain alkanols or polyols.
- 35 10. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (h), derivatives of polyisobutenylsuccinic anhydride obtainable by reacting conventional or highly reactive polyisobutylene having  $M_n$  = from 300 to 5 000 with maleic anhydride by a thermal route or via the chlorinated polyisobutene.
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11. The fuel composition according to claim 2, comprising, as a gasoline fuel additive having polar moieties (i), reaction products of polyisobutene-substituted phenols with formaldehyde and mono- or polyamines.
- 5 12. The fuel composition according to any of claims 1 to 11, comprising a gasoline fuel having a maximum olefin content of 21% by volume based on the volume of a nonadditized lower alkanol-free gasoline fuel.
- 10 13. A fuel composition according to any of claims 1 to 12, comprising a gasoline fuel having a maximum benzene content of 1.0% by volume based on the volume of a nonadditized lower alkanol-free gasoline fuel.
- 15 14. The fuel composition according to any of claims 1 to 13, comprising a gasoline fuel having a maximum oxygen content of 2.7% by volume based on the volume of a nonadditized lower alkanol-free gasoline fuel.
- 20 15. The fuel composition according to any of claims 1 to 14, comprising a gasoline fuel having a maximum aromatics content of 42% by volume based on the volume of a nonadditized lower alkanol-free gasoline fuel.
16. The fuel composition according to any of claims 1 to 15, comprising the gasoline fuel additives having the polar moieties (a) to (i) in an amount of from 1 to 5 000 ppm by weight.
- 25 17. The use of a lower alkanol in low-sulfur gasoline fuels to improve the action of an additive having detergent action or having valve seat wear-inhibiting action as defined in claim 1.
- 30 18. A process for improving the additive action of an additive having detergent action or having valve seat wear-inhibiting action as defined in claim 1 in low-sulfur gasoline fuels, by admixing the gasoline fuel with an effective amount of a lower alcohol.
- 35 19. The use of a combination of lower alcohol and at least one additive having detergent action or having valve seat wear-inhibiting action as defined in claim 1 to reduce combustion chamber deposits and/or to reduce deposits in the intake system of a gasoline engine.
20. The use of a combination of lower alcohol and additive having valve seat wear-inhibiting action as defined in claim 1 as a valve seat wear-inhibitor for gasoline fuels.